Comparative Tumor Models: Use for Assessing Novel Drug Strategies

Dr. Timothy M. Fan
Department of Veterinary Clinical Medicine
University of Illinois at Urbana-Champaign

Date: Tuesday, November 29, 2011
Time: 12:00 – 1:00 p.m. CDT (10:00 – 11:00 a.m. PDT)
Location: 1000 MNTL at Illinois (KL 361 at UC Merced)

Abstract:
Basic science in nanomedicine has rapidly advanced over the past decade, and has generated fundamentally important discoveries. However, clinical translation of nanomedicine remains in its infancy, and the development of nanotechnology platforms as novel drug delivery strategies for the treatment of cancer in people has not been fully explored. Comparative oncology is the study of shared commonalities in tumor biology among different species. In addition to human beings, the only other large mammal that develops spontaneous cancers with any frequency is the dog. Through the use of pet dogs with spontaneously-arising cancers, it is feasible to evaluate the safety and anticancer activities of nanoparticle drug delivery strategies. This seminar will highlight the use of canine tumor xenograft models, as well as, dogs with spontaneously-arising tumors for the testing and validation of targeted nanoparticle drug delivery strategies. Based upon these preclinical and clinical investigations, scientific findings provide foundational support to advance the use of targeted nanoconjugates for the management of common tumors in people.